1 Summary

STS21 switch output isolation safety barrier, controls the power of safety zone with switch, drivers the field intrinsic safety equipments of danger zone, it is applied to driver electromagnetism valve, sound and light alarm and other small power intrinsic safety devices. The isolation of input and output, allowing control switch directly connected to any end of 24Vdc DC power supply circuit.

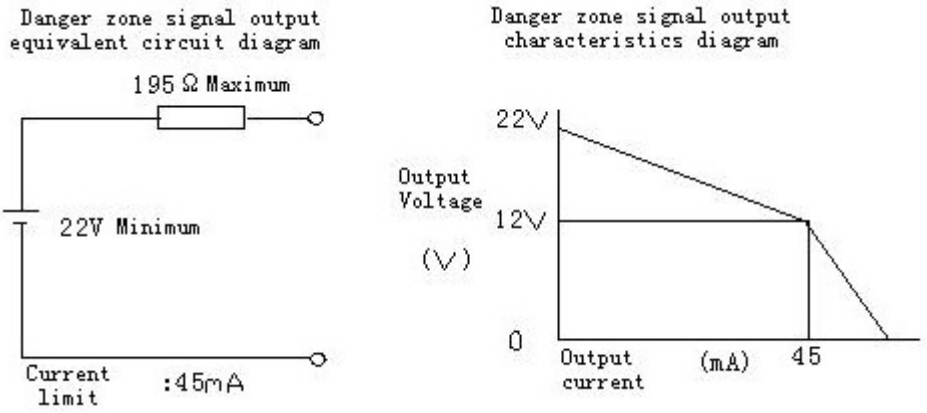
2 Technical Specifications：

Channel Single channel

Area of load Zone 0，ⅡC，T4-6 danger zone

Zone 1, Group A，Danger zone

Equivalent circuit



LED display Green：Source indication

Danger zone output Minimum output voltage：at 45mA，12V。

Maximum output voltage： 24V。

Current limit：45mA。

Source 20～35Vdc

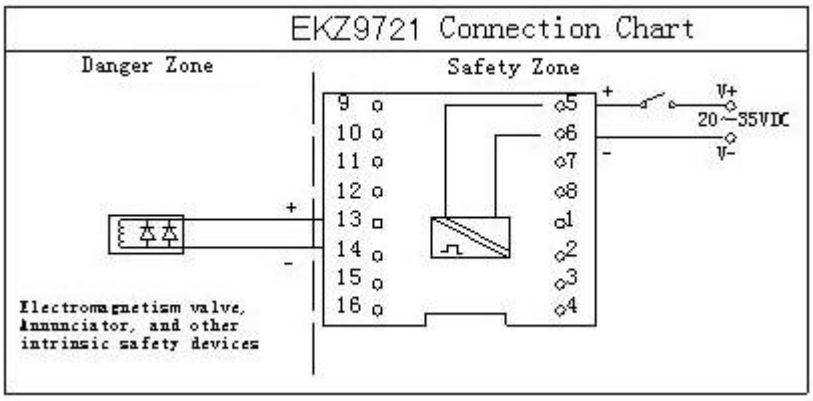
Power consumption (24V Power，at 45mA Output ≤86mA)

Number of explosion-proof certificate GYB06892

3 Safety Specifications

U_O=25.2V，I_O=125mA，P_O=0.79W

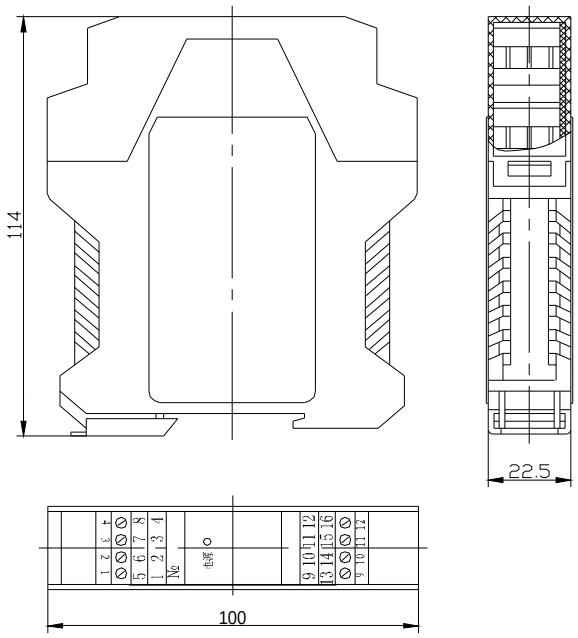
4 Signal Connections



5 STS21 Terminal Functions

Terminal Number		Terminal Function
Safety Zone （Yellow）	5	Power Input（+）
	6	Power Input（-）
Danger Zone （Blue）	13	Output（+）
	14	Output（-）

6 Dimensions



STS Series isolate barrier size chart

7 Installations

7.1 Guideway：Isolate barrier is installed on the standard international generic M35 Guideway.

7.2 Terminal lead：The cross-sectional area of soft copper wires which connect to field must be greater than 0.5mm2. The insulation strength of connecting wires must be greater than 1500V.

7.3 Installation notes

a） Isolate barrier should be put in a safe place to ensure the cleaning and no corrosive gas.

b） The circuit wiring of intrinsic ends (blue) and non-intrinsic ends (yellow) of the isolate barrier is prohibited from wrong and confusion. The intrinsic safe leads should use the blue as the marking; intrinsic leads and non-intrinsic leads should be installed separately in the leads slot, and use different casing tubes. The intrinsic safety side of isolate barrier is not allowed to have a mixture of other power, including other power supply with intrinsic safety current.

c） When the isolate barriers are with concentrated layout, it should make the intrinsic side adjacent with the intrinsic side and non-intrinsic side adjacent with the non-intrinsic side to avoid the confusion.

d） On the separate power supply debugging of isolate barrier, it is important to pay attention to the model, power polarity, voltage grading and connector tab on the shell of isolate barriers.

e） It is forbidden to test the insulation between the terminals of isolate barrier with insulation ohmmeter, to check the insulation of the system lines, it should disconnect all isolate barriers at first, otherwise it would cause the fuse of internal instant fuse.

f） If the internal module of isolate barrier is damaged and needs replacement, it is needed to return to the factory for repairing. The repaired isolate barriers should have a comprehensive re-examination before being put into operation.

g） The installation, use and maintenance of isolate barrier should strictly abide by the relevant contents of GB3836.15-2000 “Part 15 of Explosive Gas Electrical Equipment: Dangerous place electrical installation (except mine)”, GB50058-1992 “Electrical Equipment design code of Explosion and Fire Risk Environment” and product brochures.

8 Package and Storage

8.1 Isolate barriers should be packed with transparent plastic bags and put in the special packing boxes.

8.2 Isolate barriers should be stored in a ventilation indoor environment with ambient temperature of 5-40℃ and relative humidity less than 85%, and without corrosive gases in the air.

8.3 Attachment

A copy of product brochure

A copy of product certification

9 Warranty

The normal product warranty period is 18 months, the damage caused by improper use is not within the scope of warranty.